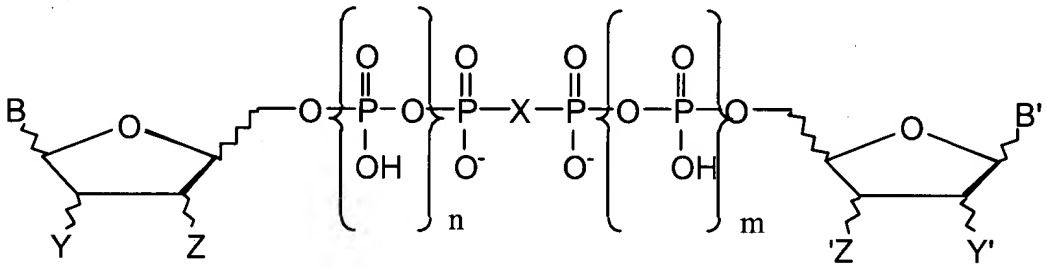
In the Claims

11. (Canceled).

12. (Original) A method of affecting the amount of or properties of the cervical and vaginal mucosa comprising administering an effective amount of a composition comprising a purinergic agent of Formula II, or pharmaceutically acceptable esters of salts thereof, to an individual in need of treatment thereof:

Formula II



wherein:

X is oxygen, methylene, difluoromethylene, imido;

n = 0, 1, or 2;

m = 0, 1, or 2;

n + m=0,1, 2, 3, or 4; and

B and B' are each independently a purine residue or a pyrimidine residue linked through the 9- or 1- position, respectively;

Z = OH or N_3;

Z' = OH or N_3;

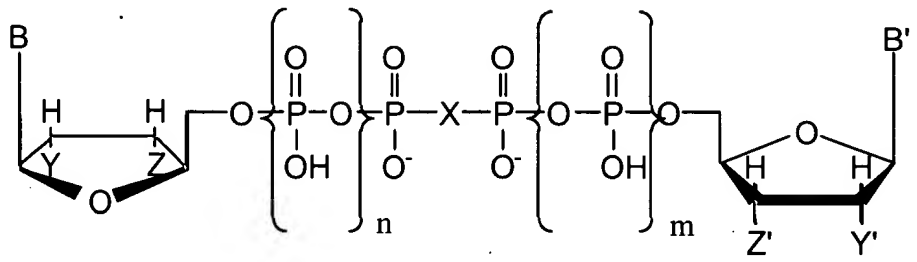
Y = H or OH;

Y' = H or OH;

provided that when Z is N_3, Y is H and when Z' is N_3, Y' is H.

13. (Currently Amended) The method of Claim 12, wherein the compounds of Formula II are those of Formula IIa:

Formula IIa



wherein:

X=O;

n+m=1 or 2;

Z, Z', Y, and Y'=OH;

B and B' are defined in Formulas IIc and IId, or

X=O;

n+m=3 or 4;

Z, Z', Y, and Y'=OH;

B=uracil;

B' is defined in Formulas IIc and IId; or

X=O;

n+m=1 or 2;

Z, Y, and Z'=OH;

Y'=H;

B=uracil;

B' is defined in Formulas IIc and IId; or

X=O;

n+m=0, 1, or 2;

Z and Y=OH;

Z'=N_3;

Y'=H;

B=uracil;

B'=thymine; or

X=O;

n+m=0, 1, or 2;

Z and Z'=N_3;

Y and Y'=H;

B and B'=thymine; or

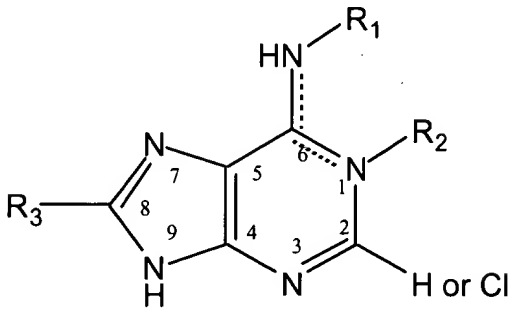
X=CH_2, CF_2, or NH;

n and m=1;

Z, Z', Y, and Y'=OH;

B and B' are defined in Formulas IIc and IId :

Formula IIc



~~Wherein~~ wherein R_1 of the 6-HNR_1 group and R_3 are chosen from the group consisting of:

(a) arylalkyl (C_{1-6}) groups with the aryl moiety optionally substituted,

(b) alkyl,

(c) ~~(carbamoylmethyl)~~ carbamoylmethyl,

(d) ω-amino alkyl (C_{2-10}),

(e) ω-hydroxy alkyl (C_{2-10}),

(f) ω-thiol alkyl (C_{2-10}),

(g) ω-carboxy alkyl (C_{2-10}),

(h) the ω-acylated derivatives of (b), (c) or (d) wherein the acyl group is either acetyl, trifluroacetyl, benzoyl, or substituted-benzoyl alkyl(C_{2-10}),

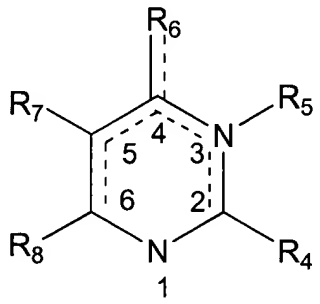
(i) ω-carboxy alkyl (C_{2-10}) as in (e) above wherein the carboxylic moiety is an ester or an amide, and

(j) hydrogen;

R_2 is O or is absent; or

R_1 and R_2 taken together may form optionally substituted 5-membered fused imidazole ring;

Formula IId



wherein:

R_4 is hydroxy, mercapto, amino, cyano, aralkoxy, C_{1-6} alkylthio, C_{1-6} alkoxy, C_{1-6} alkylamino or dialkylamino, wherein the alkyl groups of said dialkylamino are optionally linked to form a heterocycle;

R_5 is hydrogen, acyl, C_{1-6} alkyl, aroyl, C_{1-5} alkanoyl, benzoyl, or sulphonate;

R_6 is hydroxy, mercapto, alkoxy, aralkoxy, C_{1-6}-alkylthio, C_{1-5} disubstituted amino, triazolyl, alkylamino or dialkylamino, wherein the alkyl groups of said

dialkylamino are optionally linked to form a heterocycle or linked to N^3 to form an optionally substituted ring; or

R_5 - R_6 together forms a 5 or 6-membered saturated or unsaturated ring bonded through N or O at R_6, wherein said ring is optionally substituted;

R_7 is selected from the group consisting of:

(a) hydrogen,

(b) hydroxy,

(c) cyano,

(d) nitro,

(e) alkenyl, wherein the alkenyl moiety is optionally linked through oxygen to form a ring optionally substituted with alkyl or aryl groups on the carbon adjacent to the oxygen,

(f) substituted alkynyl

(g) halogen,

(h) alkyl,

(i) substituted alkyl,

(j) perhalomethyl,

(k) C_{2-6} alkyl,

(l) C_{2-3} alkenyl,

(m) substituted ethenyl,

(n) C_{2-3} alkynyl and

(o) substituted alkynyl when R_6 is other than amino or substituted amino;

R_8 is selected from the group consisting of:

(a) hydrogen,

(b) alkoxy,

(c) arylalkoxy,

(d) alkylthio,

(e) arylalkylthio,

(f) carboxamidomethyl,

(g) carboxymethyl,

(h) methoxy,

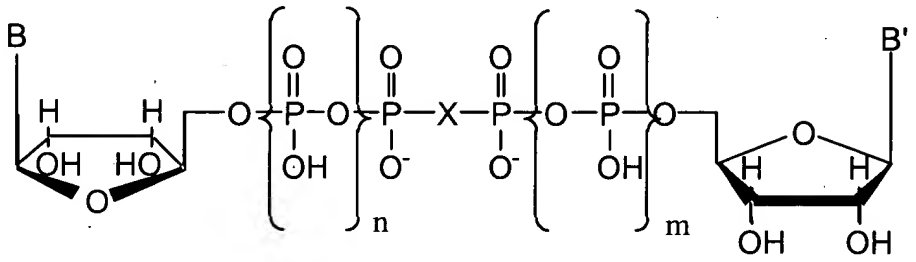
(i) methylthio,

(j) phenoxy and

(k) phenylthio.

14. (Original) The method of Claim 12, wherein the compounds of Formula II are those of Formula IIb:

Formula IIb



wherein:

X is oxygen, methylene, difluoromethylene, or imido;

n = 0 or 1;

m = 0 or 1;

n + m = 0, 1, or 2; and

B and B' are each independently a purine residue, as in Formula IIc as described in claim [[2]] 12, or a pyrimidine residue, as in Formula IId as described in claim [[2]] 12, linked through the 9- or 1- position, respectively; provided that when B and B' are uracil, attached at N-1 position to the ribosyl moiety, then the total of m + n equals 3 or 4 when X is oxygen.

15. (Original) The method of Claim 12, wherein the furanose sugar of Formula II is in the ß-D-configuration.

16. (Canceled).